



THE FEDERAL RADIONAVIGATI ON PLAN

**Civil GPS Civil Service Interface
Committee
March 28, 2000**

**Mr. Michael Shaw
Office of Radionavigation & Positioning
US Department of Transportation**



• Overview

• Background

- 1999 FRP Policies
 - Space & Ground-based Systems
- 2001 FRP Effort
- Availability of 1999 FRP



Background

- **The Federal Radionavigation Plan (FRP) is source for U.S. radionavigation policies & plans**
 - Common-Use Radionavigation Systems (Military/Civil)
 - Mandated by the INMARSAT ACT of 1978
 - Recodified in 1998 National Defense Authorization Act
 - Jointly Published by DOT and DOD Biennially
- **1999 FRP Published in February 2000**



1999 FRP Policies

- **GPS**

- **SPS Available Free of Direct Charge**
- **PPS Available Only to Military & Civil Users Authorized by Department of Defense**
- **Additional Civil Signals**
 - **2nd C/A coded Civil Signal at 1227.6 MHz (L2)**
 - **3rd Civil Signal at 1176.45 MHz (L5) for Safety-of-Life Applications**



1999 FRP Policies

- **Maritime DGPS**
 - FOC achieved on March 15, 1999
- **Nationwide DGPS**
 - Expanding Maritime DGPS to cover entire U.S.
 - Single Coverage in 2002 (IOC)
 - Double Coverage in 2003 (FOC)
- **Aeronautical Augmentations (WAAS/LAAS)**
 - WAAS: Initial Capability by end of 2000
 - LAAS: CAT I Specifications completed⁵



1999 FRP Policies

- **Marine Radio Beacons**
 - Non-DGPS have been Phased Out
- **VOR/DME**
 - Phasedown expected to begin in 2008
- **TACAN**
 - Target Date to begin Phasedown is 2008
- **Aeronautical Nondirectional Beacons (NDBs)**
 - Stand-alone NDBs to be Phased out after 2008
 - Separate transition plan for Alaska



1999 FRP Policies

- **Precision Approach Systems**
 - **Instrument Landing System (ILS)**
 - **CAT I expected to begin Phasedown in 2008**
 - **CAT II/III Phasedown not expected before 2015**
 - **Microwave Landing System (MLS)**
 - **CAT I Phasedown expected to begin in 2008**
 - **CAT II/III development program canceled**



1999 FRP Policies

- **Loran-C**
 - Will be operated in the short term
 - The Administration will continue to evaluate the long-term need for Loran-C
 - Users will be given reasonable notice if USG concludes that Loran-C is not needed nor cost effective



2001 Federal Radionavigation Plan

- **User Conferences Begin in March**
- **Begin the Draft 2001 FRP in April 2000**
- **Complete Draft Document in Dec 2000**
- **Begin Formal Clearance Process in Jan 2001**
- **SECDOT/SECDEF Signatures by July 2001**
- **Publish 2001 FRP in July/August, 2001**



2001 FRP

- **FRP User Conferences**
 - **1st User Conference conducted in conjunction with CGSIC meeting, Washington, DC**
 - **March 30th - 1 PM**
 - **2nd User Conference is planned in conjunction with ION meeting in San Diego**
 - **June 29th, 2000 - Full Day**



Summary

- **1999 FRP reiterates commitment to GPS**
 - SPS Available Free of Direct Charge
 - GPS Modernization proceeding
- **GPS Augmentations**
 - Marine DGPS FOC 1999
 - Full Nationwide DGPS Service by 2003
 - WAAS Capability in 2000
 - LAAS remains on Schedule
- **Continue evaluating the need for Loran-C**
- **Next FRP will be Published in 2001**



1999 FRP AVAILABILITY

- **Free copies available from:**
**Volpe National Transportation
System Center**
Kendall Square
Cambridge, MA. 02142
Tel: 617-494-2908
- **Also available on the Internet
at: <http://www.navcen.uscg.mil/frp>**